

APPENDIX F: COMPLIANCE MONITORING DATA FOR THE PAST 5 YEARS

Permit Requirements (853N)

Potable Water Use Volume (condition 1(a)(i))

	Plant	Non-Plant	Total MI	Limit MI/y	% of Limit	% Compliance
2010	644.4	7.7	652.1	1820	36	100
2011	764.9	3.8	768.7	1820	42	100
2012	587.3	4	591.3	1820	32	100
2013	495.6	4.2	499.8	1820	27	100
2014	432.9	7.8	440.7	1820	24	100
2015*	325.1	3.1	328.2	1213	27	100

*until 3 Sept 2015

Treated Effluent Water Use Volume (condition 1(a)(ii))

	Use	Limit MI/y	% of Limit	% Compliance
2010	0	912.5	0	100
2011	0	912.5	0	100
2012	0	912.5	0	100
2013	0	912.5	0	100
2014	0	912.5	0	100
2015*	0	608	0	100

*until 3 Sept 2015

Sea Water Volume (Condition 1(a)(iii))

	CRF	SEC	Total GI	Limit GI/y	% of Limit	% Compliance
2010	2317.4	51.8	2369.2	2920	81	100
2011	2367.6	56.8	2424.4	2920	83	100
2012	2084.7	59.9	2144.6	2920	73	100
2013	2387.9	57.9	2445.8	2920	84	100
2014	2413	53.7	2466.7	2920	84	100

2015*	1434.8	38.2	1473	1947	76	100
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**until 3 Sept 2015*

Ground Water Use Volume (Letter from DWA ref. Dated)

	Use	Limit MI/y	% of Limit	% Compliance
2010	0	500	0	100
2011	0	500	0	100
2012	0	500	0	100
2013	0	500	0	100
2014	0	500	0	100
2015*	0	333	0	100

**until 3 Sept 2015*

Exemption Requirements 1133B

SEU (Domestic waste volume) (Condition 1(a))

	Limit m3/d	% compliance	% Data Estimated	Note: Section 13 of the Exemption "Monitoring" does not require flow monitoring. However we assume this to be relevant. Due to flow measurement issues, the flow is estimated using maximum historical flows for that month. The next spreadsheet "WWTW Flow Data" goes into more detail. The basis of 97% compliance is an out of specification for one day per month which is a conservative estimate.
2011	75	97	25	
2012	75	97	0	
2013	75	97	25	
2014	75	97	100	
2015*	75	97	100	

*until 3 Sept 2015

Sea Water Volume (Condition 1(b))

	CRF	SEC	Total (Gl)	Limit Gl/y	% of Limit	% Compliance
2010	2317.4	51.8	2369.2	2920	81	100
2011	2367.6	56.8	2424.4	2920	83	100
2012	2084.7	59.9	2144.6	2920	73	100
2013	2387.9	57.9	2445.8	2920	84	100
2014	2413	53.7	2466.7	2920	84	100
2015*	1434.8	38.2	1473	1947	76	100

*until 3 Sept 2015

Industrial Water Volume (condition 1(c))

	Limit m3/d	% compliance	Note: There is no limit on industrial effluent however this is monitored by Koeberg NPS with an annual target set for tracking purposes.
2010	None	100	
2011	None	100	
2012	None	100	
2013	None	100	
2014	None	100	
2015*	None	100	

*until 3 Sept 2015

Domestic Effluent Quality (Condition 2)

% compliance After Mixing in Cooling Water

	Free Chlorine	pH	K(25)	NH3-N	COD	TSS	Faecal Coli	<p><u>Note1:</u> The data before mixing with cooling water is available however the Exemption only requires compliance to the General Standard after mixing with cooling water. <u>Note2:</u> The chlorine limit and Faecal Coli is not based on the General Standard but on Exemption Condition 2 (Faecal Coli) and Condition 3 for chlorine.</p>
Limit	0.5 mg/l	5.5 to 9.5	150 mSm	10 mg/l	75 mg/l	25 mg/l	1000 u/100ml	
2010	100	100	100	100	100	100	100	
2011	100	100	100	100	100	100	100	
2012	100	100	100	100	100	100	100	
2013	100	100	100	100	100	100	100	
2014	100	100	100	100	100	100	100	
2015*	100	100	100	100	100	100	100	

*until 3 Sept 2015

Cooling Water Effluent (Condition 3)

% Compliance

	Free Chlorine	Temperature above intake	<p>Note: Normal temperature increase limit is 10 and the abnormal temperature increase limit is 13 in terms of DWAF letter dated 28 October 1985. The temperature increase varies from 9.6 and 10.2 depending on tides and intake temperature. The average temperature increase is below the limit of 10.</p>
Limit	0.5 mg/l	10°C and 13°C	
2012	99.0	100	
2013	99.7	100	
2014	99.3	100	
2015*	99.7	100	

*until 3 Sept 2015

Industrial Effluent (Condition 3)

% Compliance

	Boron	<p>Note: The internal limit of 1700 mg/kg in the discharges tanks prior to release gives a margin to the Exemption limit of approximately 60%. This internal limit was never exceeded.</p>
Limit	1 mg/l	
2012	100	
2013	100	
2014	100	
2015*	100	

*until 3 Sept 2015

Radiological Effluent (Condition 4, 5, 8)*% of NNR Limit (only nuclides more than 1% of limit are shown)*

	Ag-110m	Co-57	Co-58	Co-60	Cr-51	H-3	Mn-54	Na-24	Nb-95	Sb-124	Sb-125	Zn-65	Zr-95
2010	27.75	31.14	8.18	13.12	0.19	5.36	4	1.36	1.6	0.34	5.1	0.18	1.92
2011	17.9	17.55	9.82	7.98	0.166	7.24	1.91	0.03	2	0.94	0.303	0.02	0.61
2012	8.32	5.65	7.61	4.54	0.11	3.97	0.88	0.01	2.29	6.44	0	0.03	0.18
2013	5.65	1.44	2.25	2.15	1.26	6.53	0.42	0.43	14.6	3.19	0.45	0	8.76
2014	8.22	2.25	3.22	1.16	0.06	4.6	0.2	0.01	0.42	3.12	0	0.01	0.19
2015*	2.75	0.56	0.67	1.18	0.02	2.29	0.2	0	2.54	0.26	0	0.03	1.11

** until 30 June 2015*KEY: **More than 10%**

WWTW (Domestic Effluent - SEU) Flow Data 1133B

Year	2011	2012	2013	2014	2015
Jan	41.4	34.0	41.4	41.4	41.4
Feb	46.5	37.4	46.5	46.5	46.5
Mar	38.6	48.5	38.6	48.5	48.5
Apr	61.5	49.5	34.9	61.5	61.5
May	65.6	42.5	36.8	65.6	65.6
Jun	48.6	37.3	36.6	48.6	48.6
Jul	38.2	37.8	37.7	38.2	38.2
Aug	30.4	38.1	32.8	38.1	38.1
Sep	31.1	51.5	33.7	33.7	no data yet
Oct	31.1	48.8	48.8	31.1	no data yet
Nov	41.3	56.4	56.4	41.3	no data yet
Dec	32.0	41.3	56.4	41.3	no data yet

**status at 3 Sept 2015*

Note: Monthly average provided above

	This colour relates to outage periods when flows are highest
	Shaded block means estimate using highest historical average monthly reading